Short set of instructions for ingesting and displaying new MODIS Enhanced SST composite by SPoRT

To ingest:

The WFO should already be receiving data via Southern Region (SR) LDM by requesting items that have "sport" or "sport_modis" in the name. The filenames of the new 2km, large domain MODIS SST composite and latency products look like this:

"*20100128_0700_sport_modis_nhemis_sstcomp.gz* "
and
"*20100128_0700_sport_modis_nhemis_sstlate.gz* ".

Your LDM client should be putting the unzipped file into something like */data/ldad/sport* via a call to the simple.pl script within the pqact.conf file. Check to see if the file is here or listed in the LDM logs. If not, adjust the *ldmd.conf* and *pqact.conf* similar to existing SPoRT products being pulled from SR LDM.

With the ldmd.conf and pqact.conf configured to ingest the new MODIS file, you will need to edit the Perl file *sportldadconfig.pl* so that the script *ldadsport.pl* will place the new file in the appropriate directory. Look for the *ldadsport.pl* in ~*ldad/bin* and there should also be a file called *sportldadconfig.pl*. This is the file that lists where to put the data.

Add the location of the new SST composite and latency to the bottom of the list as shown in the partial example code below. Note that a comma is at the end of each line of the code except the last line. The root of these directories is defined in *ldadsport.pl.* The default directory is */data/fxa/sat/SPORT/netCDF/*.

```
'hybrid_sre_11um'=>'modisHybrid/sre/11um/',
'hybrid_sre_39um'=>'modisHybrid/sre/39um/',
'hybrid_sre_wv'=>'modisHybrid/sre/wv/',
'modis_nhemis_sstcomp'=>'modis/conus/sstcomp/',
'modis_nhemis_sstlate'=>'modis/conus/sstlatency/'
)
;
```

Then, make the actual directories to store the data:
/data/fxa/sat/SPORT/netCDF/modis/nhemis/sstcomp/
/data/fxa/sat/SPORT/netCDF/modis/nhemis/sstlatency/

To display in D2d: Edit the AWIPS files in the *customfiles* directory

Add the *sportSSTnhemi.sup* file to the *customFiles* directory

Add or modify lines in *WFO-localDataKeys.txt*
Note: Your product numbers will be different and must remain consistent as you edit other files. In this example code the "7393" and " 7394" are the product numbers. Some users may have procedures that use the existing SST product (and hence product number). You may want to just modify the existing product to have the new references to the .sup file and data directory

```
7393  |sportSSTnhemi |0 |   |2 |2 |   |sat/SPORT/netCDF/modis/nhemis/sstcomp   |  |  |SPORT
7394  |sportSSTnhemi |0 |   |2 |2 |   |sat/SPORT/netCDF/modis/nhemis/sstlate   |  |  |SPORT
```

Add or modify lines in *WFO-localDepictKeys.txt*

```
7393 |2 |7393 |  |0 |0 |Sea Surface Temperature        |SST Composite    |8 |0 |1 |1181|
7394 |2 |7394 |  |0 |0 |Sea Surface Temp. Latency      |SST Latency      |8 |0 |1 |1140|
```

For the product color table:

- Your existing color tables for the SST and Latency composites may already match the SPoRT web graphics. If not you can use the provided file and Appendix A to add new color tables to customColorMaps.nc and find their table number ("1181" and "1140" in above lines) for the lines in *WFO-localDepictKeys.txt*

Add or modify lines in *WFO-localProductButtons.txt* like this example code

```
 7393  |  7393,  7393,  7393,  7393,  7393,  7393  |SST Composite      |SST Composite      |0
 7394  |  7394,  7394,  7394,  7394,  7394,  7394  |SST Latency        |SST Latency        |0
```

Add or modify lines in *WFO-otherSatMenus.txt* file to include this new product in the "Satellite > Local Satellite Data" menu of D2d.

```
submenu: "SPoRT SST Composite"
  productButton: 7393 #  SST Composite
  productButton: 7394 #  SST Latency
endSubmenu
```

If needed, modify *localImageStyle.txt* file to change the byte values into actual data values. This has not changed from the 4x/day version of the product. Below is the example code to put in the file and you just need to change the product numbers at the beginning of the line to match what you are using. The SST composite uses bits 3 to 253 and has a range from 26.312F (270K) to 116.312F (320K). The SST latency has bit values from 10 to 150 and has a range from 0 to 14 days.

```
### SPoRT SST composite (2km) Northern Hemisphere by SPoRT
# in Fahrenheit #
7393|  |26.312 3|32.|40.|50.|60.|70.|80.|90.|100.|110.|116.312 253
### SPoRT SST composite latency Northern Hemisphere in days by SPoRT
7394|  |0. 10|1.|2.|3.|4.|5.|6.|7.|8.|9.|10.|11.|12.|13.|14. 150
```

Run a localization. For our system, one example command would be:

~fxa/data/localization/scripts/mainScript.csh –dataSups –tables HUN HUN (for the Huntsville WFO)

Restart D2d and try to view the new 2km, large domain SST composite and latency products. The files are large and they are on a different map projection from the D2d display. So it will take time to load and remap to the D2d scale projection. Compare your display to the SPoRT Sea Surface Temperature website page.

Setup Purging in AWIPS

a. Add a line to /data/fxa/customFiles/localPurgeInfo.txt for these new SST composite and latency products by following the syntax that already exists for other SPoRT products.
b. Run localization on dx1 as user fxa using the "-purge" option

```
/awips/fxa/data/localization/scripts/mainScript.csh -purge
```

c. Restart the Notification Server
d. Restart purgeProcess on dx1

```
ps –wef | grep purgeProcess
kill -9 <purgeprocess_id>
$FXA_HOME/bin/purgeProcess –commit &
ps –wef | grep purgeProcess
```

Appendix A: Extracting color tables for use in customColors.nc

The bulk of this appendix is taken from the original SPoRT install instructions and you should already have the various Perl scripts described below (Please contact us if you need them again or if not in the zip file you are using). This is just a reminder of how to use these scripts and files to obtain a color curve that more closely matches what SPoRT uses in its web graphics, and hence, facilitate that what you see in D2d is correct. The file with new color tables should be provided to you and like have "ColorMaps" in the filename.

2. Install Color Curves and get color numbers as user fxa on dx1
    a. First backup your existing color curve file (located in /data/fxa/workFiles)

       cp customColorMaps.nc customColorMaps.nc.backup(date)

    b. Now using the provided utility in the untarred AWIPS/colorMapsProgram directory (or /data/fxa/workFiles may already have the scripts), we will merge in the new color curves

       ./extractcolorcurve.pl customColorMaps_SPoRT_SST.nc
       /data/fxa/workFiles/customColorMaps.nc

       The program will ask for a list of color Curves to extract, Type:

       - 0,1,2,3 ,4 (for example, or whichever numbers are relevant)
       - <return>

    c. Now run readoutnames.pl to obtain the color number of the tables just added to customColorMaps.nc

       ./readoutnames.pl /data/fxa/workFiles/customColorMaps.nc

       - Find new Color Curves and write down the numbers

3. Fix files in customFiles with color curve number
    a. Edit */data/fxa/customFiles/localDepictKeys.txt*.
        i. Find the line(s) of the product(s) where the new color table will be applied and change the number in the last column to match what you have written down from the previous step.
    b. Save the file
    c. Run a localization for this to take effect.